THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte RAY A. STOLLER

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Appeal No. 96-0541
Application 08/034,845[1]

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ON BRIEF

_____

Before FLEMING, LEE and TORCZON, ***Administrative Patent Judges***.

FLEMING, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 5 and 7 through 15, all of the claim present in the application. Claims 1 through 4, 6 and 16

[1]Application for patent filed March 19, 1993.

have been canceled.

Appellant's invention relates to AC plasma display panel systems which are particularly adapted for presentation displays with large viewing angle and high visibility in sunlight.

Independent claims 5, 7 and 11 are reproduced as follows:

> 5. In an AC plasma display panel having a linear row electrode array on a first substrate having first and second sides and a linear column electrode array on a second substrate having third and forth sides, said row and column electrodes defining a matrix of display pixels, dielectric coating means on said electrode arrays, means spacing said electrode arrays apart a predetermined discharge gap distance and a gaseous discharge medium filling the space between said electrode arrays at predetermined gas pressure, the improvement for enhancing brightness and contrast of subject matter displayed on said panel, comprising:
>
> > each electrode in said linear row electrode array is constituted by first and second furcated row conductors, the first of said furcated row conductors being driven from one end of said first substrate and the other of said furcated row conductors being driven from the opposite end of said first substrate,

each electrode in said linear column conductor array being constituted by a furcated column conductor, oriented transverse to said linear row electrodes to define a plurality of rectangularly blocked sub-pixels for each said display pixel,

the spacing between each linear row electrode in said linear row electrode array being greater than the spacing of said furcated row conductors, and the spacing between column electrodes in said linear column electrode array being greater than the spacing between said furcated column conductors to provide greater discrimination or contrast between each said display pixel, and high overall pixel brightness.

7. A high brightness AC plasma display device comprising:

a) a first substrate having a first array of linear electrodes thereon, each electrode in said first array of linear electrodes being constituted by a plurality of parallel furcations connected to a common source of operating potentials,

b) a first dielectric layer on said first array of linear electrodes,

c) a plurality of linear non-conductive barriers formed in spaced array on said first dielectric layer and parallel to said plurality of parallel furcations, to define a plurality of discharge channels aligned with said linear electrode array, there being at least two discharge channels for each electrode in said first array of linear electrodes and at least one furcation of an electrode aligned with each said at least

two discharge channels, respectively,

d) each said linear non-conductive barriers having pairs of phosphor wall surfaces which are at an angle to said first substrate, there being at least four said wall surfaces for each electrode in said first array of linear electrodes,

e) a UV responsive photoluminescent phosphor stripe on each of said wall surfaces, respectively,

f) a second substrate having a second linear electrode array thereon and arranged transversely to said first array of linear electrodes to define a matrix of pixel sites,

g) a second dielectric layer on said second linear electrode array,

h) seal means joining said substrates together, and

i) a gas medium filling said channels and sealed therein by said seal means, said gas medium producing UV light on discharge by application of operating potentials to selected electrodes in said first and second linear electrode arrays, respectively.

11. A flat, row/column matrix display panel having high pixel visibility and high contrast between pixels, comprising, an AC plasma display panel having furcated row electrode arrays and furcated column electrode arrays, a dielectric layer having spaced lands forming gas-filled channels on one of said electrode arrays and

having the furcated electrodes of said one of said electrode arrays aligned with said lands, such that a number of sub-pixels is formed at each crossing of a furcated row electrode with a furcated column electrode is the product of the number of furcations in each row electrode times the number of furcations for each column electrode, and the edge-to-edge spacing between electrodes in each array being substantially greater than the spacing between furcations to provide a small dark line of separation and greater contrast between pixels.

The references relied on by the Examiner are as follows:

Grier	3,701,184	Oct. 31, 1972
Holmberg et al. (Holmberg)	4,820,222	Apr. 11, 1989
Buzak et al. (Buzak)	4,896,149	Jan. 23, 1990
Miyake et al. (Miyake)	5,086,297	Feb. 04, 1992

L.E. Tannas, Jr. “Flat-Panel Displays and CRTs” published 1985 by Van Nostrand Reinhold Company (N.Y.), pages 369-390.

Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over Grier and Holmberg. Claims 7 through 15 stands rejected under 35 U.S.C. § 103 as being unpatentable over Miyake and Grier. Claims 7 through 15 stand rejected under 35 U.S.C.

§ 103 as being unpatentable over Miyake, Tannas, Buzak and Grier.

Rather than repeat the arguments of Appellant or the

Examiner, we make reference to the briefs[2] and the answers[3] for the details thereof.

OPINION

After a careful review of the evidence before us, we agree with the Examiner that claims 5 and 11 through 15 are

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[2]Appellant filed an appeal brief on October 13, 1994. We will refer to this appeal brief as simply the brief. Appellant filed a reply appeal brief on March 9, 1995. We will refer to this reply appeal brief as simply the reply brief. The Examiner responded the reply brief with a supplemental Examiner's answer and thereby entered the reply brief into the record. On March 9, 1995, Appellant filed an amendment. The Examiner stated in the supplemental Examiner's answer that this amendment is not entered into the record. Appellant filed a reply appeal brief to Supplemental Examiner's Answer on June 27, 1995. We will refer to this reply appeal brief as simply the supplemental reply brief. On June 27, 1995, Appellant filed an amendment which was not entered into the record. The Examiner stated in the Examiner’s letter, mailed July 25, 1995 that the supplemental reply brief has been entered and considered but no further response by the Examiner is deemed necessary. The Examiner also stated in the letter that the June 27, 1995 amendment is not entered into the record.

[3]The Examiner responded to the brief with an Examiner's answer, mailed January 9, 1995. We will refer to the Examiner's answer as simply the answer. We note that the answer contains a new ground of rejection rejecting claims 7 through 15 under 35 U.S.C. § 103 as being unpatentable over Miyake, Tannas, Buzak and Grier. The Examiner responded to the reply brief with a supplemental Examiner's answer, mailed May 30, 1995. We will refer to the Supplemental Examiner's answer as simply the supplemental answer.

properly rejected under 35 U.S.C. § 103. Thus, we will sustain the

rejection of these claims but we will reverse the rejection of the remaining claims on appeal for the reasons set forth ***infra***.

On pages 5-8 of the brief, Appellant argues that the Examiner's rejection of claim 5 as being unpatentable in view of Grier and Holmberg is improper because there is no teaching or suggestion that "the first furcated row conductor being driven from one end of said substrate, the other end of said furcated row conductor being driven from the opposite end of said substrate" as required by Appellant's claim 5. We note that Appellant has misquoted claim 5. Claim 5 actually recites "the first ***of said*** furcated row conductor***s*** being driven from one end of said first substrate ***and the*** other of said furcated row conductor***s*** being driven from the opposite end of said ***first*** substrate." Emphasis added.

On page 4 of the answer, the Examiner argues that Holmberg teaches this limitation in Figure 4. Upon a careful

review, we find that Holmberg teaches in Figure 4 the first of said furcated row conductor**s**, elements 90 and 94, being driven from one end of said first substrate via pad 92 and the other of said furcated row conductors, the two horizonal conductors electrically connected to pad 102 being driven from the opposite end of said first substrate via pad 102 as recited in Appellants' claim 5.

We find that the Examiner properly found that Holmberg suggested the desirability modifying the first and second frucated row conductors of Grier to be driven from opposite panel ends as taught by Holmberg. In column 5, lines 65-67, Holmberg teaches that driving the row conductors at opposite sides provides additional connecting space for the pads. In view of this teaching, we find that Holmberg suggests to those skilled in the art to modify Grier in order to provide additional connecting space. Therefore, we will sustain the Examiner's rejection of claim 5 under 35 U.S.C. § 103 as being unpatentable over Grier and Holmberg.

Claims 7 through 15 stand rejected under 35 U.S.C. § 103

as being unpatentable over Miyake and Grier. Appellant argues on pages 8-16 of the brief that neither Miyake or Grier teach or suggest discharge channels as recited in Appellant's claims 7 through 15.

It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the reasonable teachings or suggestions found in the prior art, or by a reasonable inference to the artisan contained in such teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." ***Para-Ordnance Mfg., Inc. v. SGS Importers Int'l, Inc.***, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), ***cert. denied***, 117 S.Ct. 80 (1996), ***citing W. L. Gore & Assocs., Inc. v. Garlock, Inc.***, 721 F.2d

1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), ***cert. denied***, 469 U.S. 851 (1984).

After a careful review of both Miyake and Grier, we fail to find any teaching of discharge channels as recited in Appellant's claims 7 through 15. Therefore, we will not sustain the Examiner’s rejection of claims 7 through 15 under 35 U.S.C. § 103 as being unpatentable over Miyake and Grier.

Claims 7 through 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Miyake, Tannas, Buzak and Grier.

Appellant argues on pages 1 and 2 of the reply brief that the Examiner improperly read the Miyake's element 21 as the claimed "second substrate". Appellant points out that Miyake discloses in Figure 2 that both electrode arrays 24 and 25 are on the same substrate 22. Appellant further points out that Miyake's element 21 does not have any electrode on it, but rather

Figure 2 shows that element 21 has a phosphor layer or fluorescent screen 29 thereon.

The Examiner argues on page 3 of the supplemental answer the Appellant's "claims never require that the first substrate and the first array of linear electrodes to be adjacent with each other, and the second substrate and the second array of linear electrodes are adjacent to each other." The Examiner further states:

> Even though Figure 2 of Miyake does not show the second linear electrode array 25 is directly on the second substrate 21, Figure 2 of Miyake is broadly interpreted by the Examiner to include a first substrate (22)having a first array of linear electrodes (24) thereon, a second substrate (21) having a second array of linear electrodes (25) thereon (phosphor screen 29, cell barrier 23, layers 28, 27, and electrodes 25 are interpreted to be included in the substrate 21).

Appellant responds to these Examiner's arguments on page 2 of the supplemental reply brief that Appellant's claims require a linear electrode array directly thereon the second substrate.

We note that Appellant's claim 7 recites "a first substrate having a first array of linear electrodes thereon." We further note that Appellant's claim 7 recites "a second substrate having a second linear electrode array thereon." We note that the Appellant has argued that this claim language

requires a first array placed directly thereon the second substrate, we find that Appellant's claim language recites this limitation. Therefore,

we will not sustain the Examiner's rejection of claims 7 through 10 which recite such a limitation.

However, upon reviewing claims 11 through 15, we fail to find that these claims recite a second substrate having a second linear electrode array thereon. At the outset, we note that Appellant has indicated on page 5 of the brief the claims stand or fall together. In addition, on pages 1 through 4 of the reply brief as well as the supplemental brier, Appellant argues claims 11 through 15 as a group. 37 CFR § 1.192(c)(5) amended October 22, 1993 states:

> For each ground of rejection which appellant contests and which applies to more than one claim, it will be presumed that the rejected claims stand or fall together unless a statement is included that the rejected claims do not stand or fall together, and in the appropriate part or parts of the argument under subparagraph (c)(6) of this section appellant presents reasons as to why appellant considers the rejected claims to be separately patentable.

As per 37 CFR § 1.192(c)(7), which was controlling at the time of Appellants filing the brief, we will, thereby, consider Appellant’s claims 11 through 15 to stand or fall together, with claim 11 being considered the representative claim.

Appellant argues that none of the references discloses or suggests the Examiner's combination as claimed. Appellant states

that the Examiner's assertion is that Miyake has phosphor on walls, Tannas has AC dielectric layers, Buzak has channels and Grier has furcations. Appellant argues that the portion of each reference used have been pulled out and then reassembled following the Appellant's claims not by suggestions in the art.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84

n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

However, we note that the Examiner did provide reasons which would have suggested to one of ordinary skill in the art to make the Examiner's proposed modifications. Appellant has not provided in the briefs any specific arguments as to the Examiner's reasoning as to why those skilled in the art would have made the combination.

The Federal Circuit reasons in **Para-Ordnance Mfg.**, 73 F.3d at 1088-89, 37 USPQ2d at 1239-40, that for the determination of

obviousness, the court must answer whether one of ordinary skill
in the art who sets out to solve the problem and who had before him in his workshop the prior art, would have been reasonably expected to use the solution that is claimed by the Appellant. Furthermore, the test of obviousness is not

whether features of a secondary reference may be bodily incorporated into the primary reference's structure, nor whether the claimed invention is expressly suggested in any one or all of the references; rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. ***See In re Keller***, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

We fail to find the Examiner has erred in the rejection of claims 11 through 15 as being unpatentable over Miyake, Tannas, Buzak and Grier. Appellant has chosen not to argue why the reasons provided by the Examiner are not proper as a basis for combinability. We are not required to raise and/or consider such
issues. As stated by our reviewing court in ***In re Baxter Travenol Labs.***, 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991), "[i]t is not the function of this court to examine the claims in greater detail than argued by an appellant, looking

for nonobvious distinctions over the prior art." 37 CFR § 1.192(a) as amended at 58 Fed. Reg. 54510, Oct. 22, 1993, which was controlling at the time of Appellants filing the brief, states as follows:

> The brief . . . must set forth the authorities and arguments on which the appellant will rely to maintain the appeal. Any arguments or authorities not included in the brief may be refused consideration by the Board of Patent Appeals and Interferences.

Also, 37 CFR § 1.192(c)(6)(iv) states:

> For each rejection under 35 U.S.C. 103, the argument shall specify the errors in the rejection and, if appropriate, the specific limitations in the rejected claims which are not described in the prior art relied on in the rejection, and shall explain how such limitations render the claimed subject matter unobvious over the prior art. If the rejection is based upon a combination of references, the argument shall explain why the references, taken as a whole, do not suggest the claimed subject matter, and shall include, as may be appropriate, an explanation of why features disclosed in one reference may not properly be combined with features disclosed in another reference. A general argument that all the limitations are not described in a single reference does not satisfy the requirements of this paragraph.

Thus, 37 CFR § 1.192 provides that this board is not under any greater burden than the court which is not required to raise

and/or consider such issues.

In view of the foregoing, the decision of the Examiner rejecting claims 5 and 11 through 15 under 35 U.S.C. § 103 is affirmed; however, the decision of the Examiner rejecting claims 7 through 10 under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

MICHAEL R. FLEMING Administrative Patent Judge	)	
JAMESON LEE Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES

RICHARD TORCZON)
Administrative Patent Judge)

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